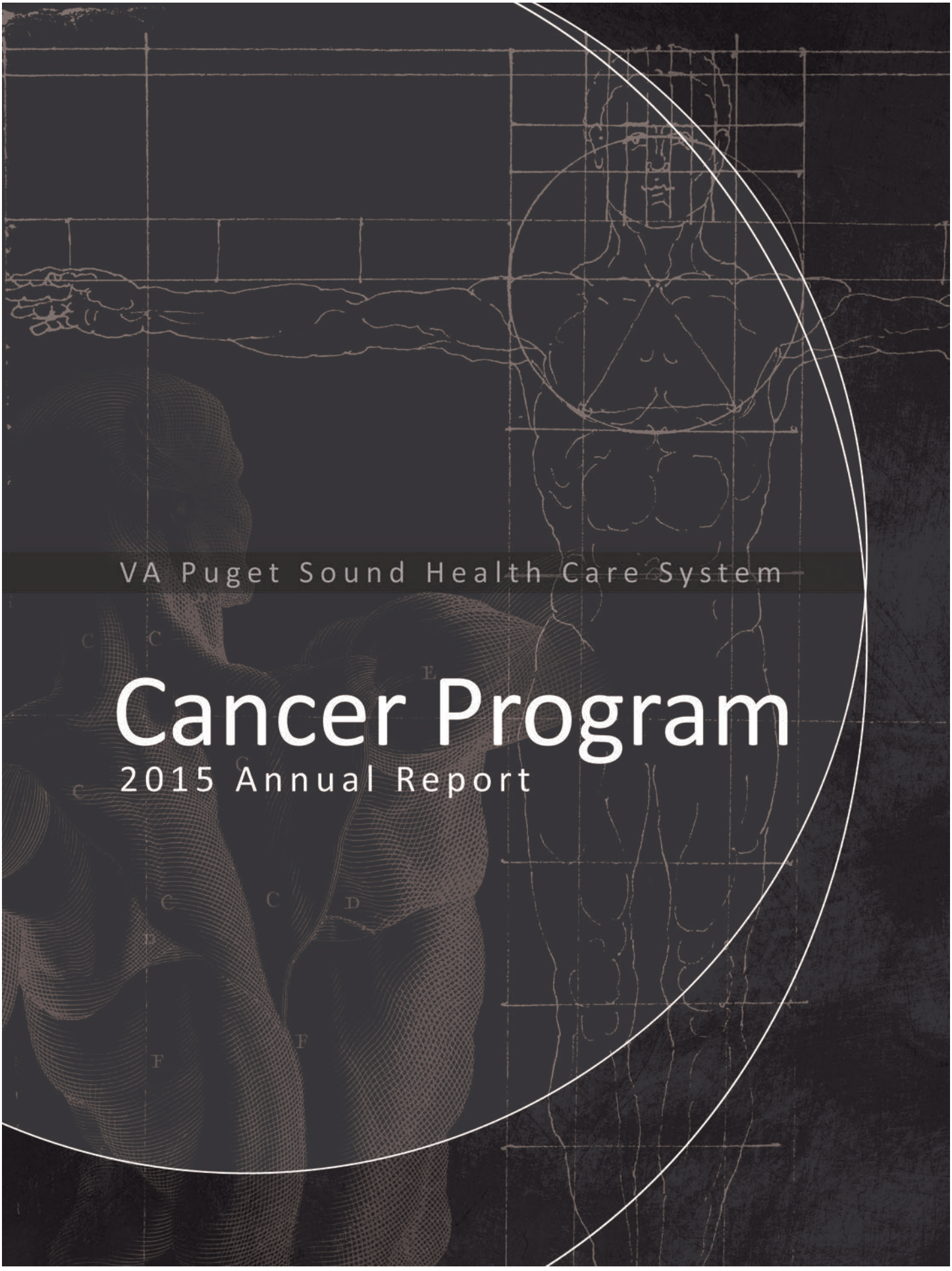


VA Puget Sound Health Care System

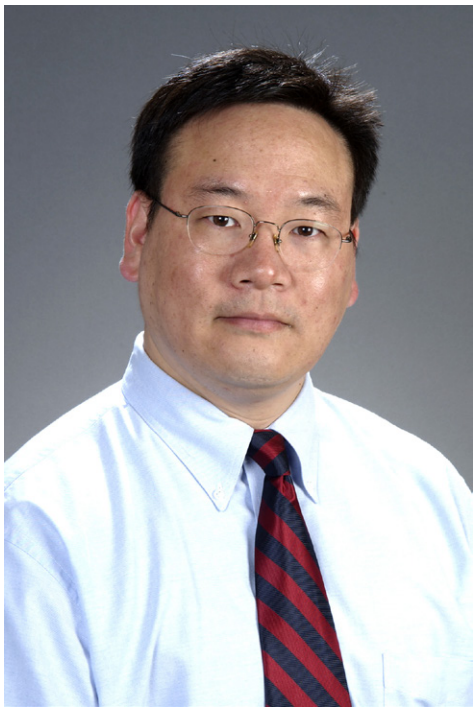
Cancer Program

2015 Annual Report

Chairman's Message

Chairman's Message

Peter C. Wu, M.D., F.A.C.S



The mission of the VA Puget Sound Cancer Care Program is to provide excellent multidisciplinary and compassionate care to our Veterans diagnosed with cancer. With a 2014 reported caseload of nearly 1,000 new cancer patients, our center continues to rank among the most comprehensive and busiest VA cancer centers in the United States.

There were several noteworthy events this past year. We underwent our triannual Commission on Cancer accreditation review and awarded with Commendation Gold status by our site reviewer who commented to our facility leadership that among the numerous VA facility cancer programs that he has reviewed in recent years, the VA Puget Sound stands out for being the most comprehensive and innovative program with a wide offering of clinical trials that benefit cancer patients in our region. Last year, the VISN20 Cancer Care Platform Initiative provided the necessary funding to create our Cancer Care Navigator Team (CCNT). Under the leadership of Tamarind Keating, ARNP, the CCNT team at Puget Sound has become widely recognized with expanded roles into cancer survivorship and managing interfacility cancer referrals to improve overall quality of care. We have also joined a VA consortium led by the Boston VA to support and expand clinical trials sponsored by the Southwest Oncology Group. With the addition of on-site PET-CT capability to our established radiation oncology and bone marrow transplantation programs, we offer an extensive range of cancer services.

The 2015 Annual Report highlights the wide-range of services and clinical trials offered within the VA Puget Sound Cancer Program and recognizes the important contributions from all service lines and departments. We thank our local and regional VA leadership for their continued support of the Cancer Care Program and continue to strive to provide the highest quality cancer care for our nation's veterans.

INSIDE THIS REPORT

Cancer Registry Report

Sudarshana Das, COC Cancer Program Manager
& Cancer Registry Manager, CTR

Cancer statistics and cancer related data are an indispensable contributor to cancer research and outcome measurement, one of the foremost weapons in the fight against cancer disease.

In 2015 the projected number of new cancer diagnoses in the USA will be 1,658,370 and an estimated 589,430 cancer deaths, according to the National Cancer Institute (NCI) & American Cancer Society (ACS) projections. The Annual Report on the Status of Cancer is jointly authored by subject matter experts at NCI, CDC (Centers for Disease Control and Prevention), and the NAACCR (North American Association of Central Cancer Registries).

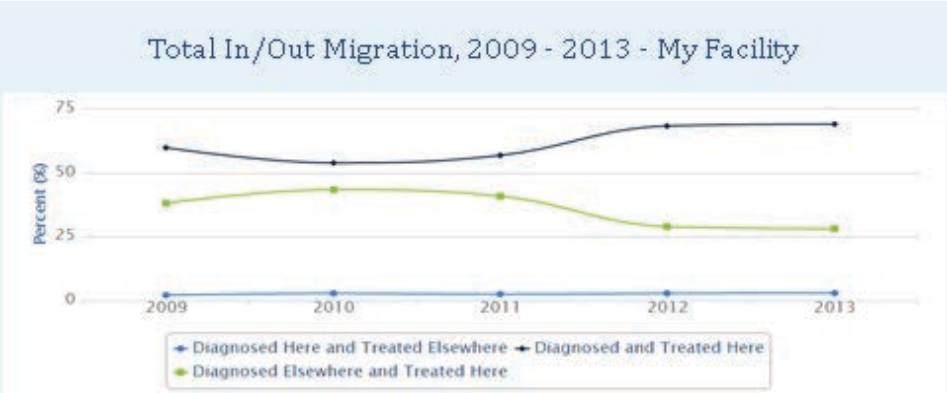
Ever thought where this data originates from? All cancer statistics stems from grass-root level collection of cancer data at local hospital cancer registries by specially trained staffs, which are then transmitted to state and national cancer databases for multiple uses. For example, the National Cancer Database (NCDB) developed in 1988 by COC and ACS, contains approximately 32 million records from cancer registries at 1,500 COC-accredited US hospitals. SEER database is another example.

A cancer registry collects and accurately records the clinical journey of a cancer patient starting from diagnosis to treatment received and also conducts life-long follow-up of cancer patients to enable survival and outcome related studies and research. It is therefore imperative that accurate, high quality cancer data is collected & analyzed by certified cancer data specialists i.e. CTRs (certified tumor registrars), with specialized training for the purpose.

Uses for Cancer Registry Data

Cancer Registry data has innumerable uses, including cancer research and outcome measurement, analyzing patterns of care and quality of care, evaluating the effectiveness of current treatment modalities, developing educational programs, early detection/ screening cancer programs, and can help leadership in making informed decisions for hospital expansion, resource allocation and other business purposes.

Example- COC-CQIP report using NCDB data from VAPSHCS registry:



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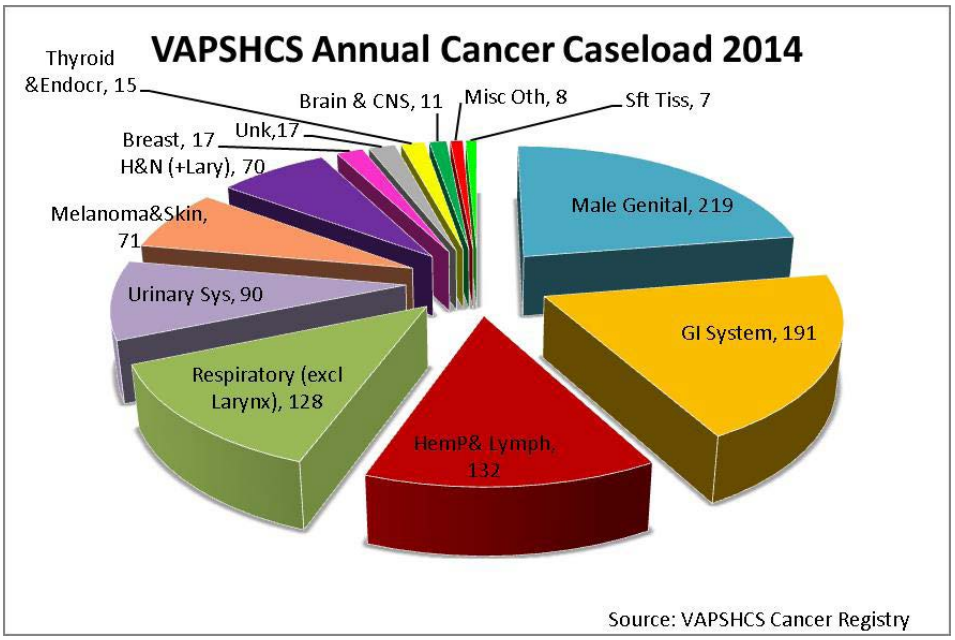
Cancer Registry Report (Continued)

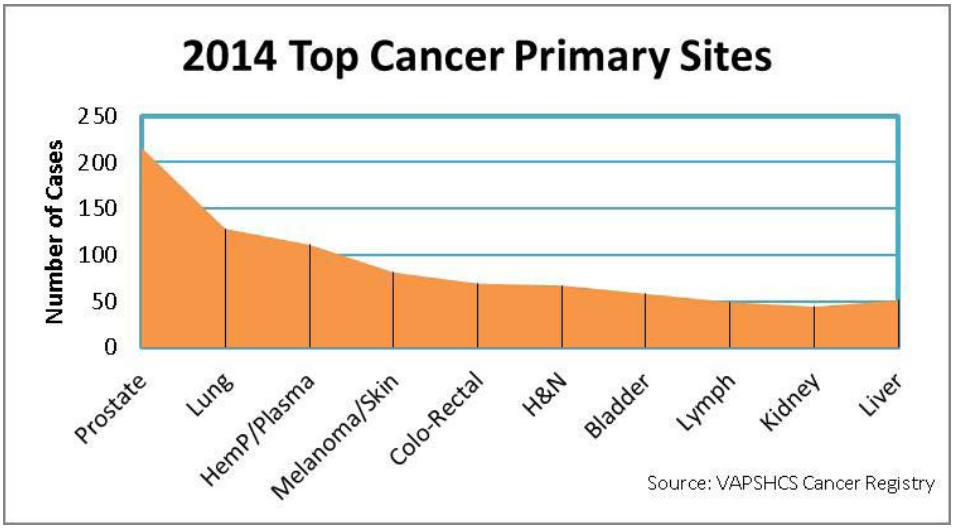
VAPSHCS Cancer Registry

The VAPSHCS Cancer Registry is managed by a facility employed Cancer Program Manager/CTR and the bulk of registry work is contracted out to qualified vendor chosen by the VISN-20 Contracting Office. Best Practices Group is our current vendor for cancer registry work.

VAPSHCS Cancer Registry participates and provides data for special studies conducted at our facility, or at national level for patient care quality improvement studies, and for all other valid purposes as requested.

The Registry also regularly submits data to various national databases, including VA Central Cancer Registry (VACCR), Commission on Cancer-National Cancer Data Base (COC-NCDB), WA State Cancer Registry (WSCR) through Cancer Surveillance System (CSS), NCI/ SEER. All data submitted are per data-use agreements & are aggregate data with patient identifiers and protected information removed during data submission.





VAPSHCS Cancer Registry Data, complete year 2014

In 2014, 863 analytic cases of cancer, and 113 non-analytic cases, for a total of 976 cancer cases were accessioned into the cancer registry database.

The top ranking cancer primary sites seen at our facility in 2014 were Prostate, Lung, Hematopoietic & Plasma Cell, Melanoma, Colo-Rectal, Head & Neck, Bladder, Liver, Lymphoma and Kidney.

Glossary of Terms:

Abstract: a summary or abbreviated record that identifies, a cancer patient's disease process from time of diagnosis till patient's death including diagnosis, staging, cancer treatment. This forms the basis of a cancer registry.

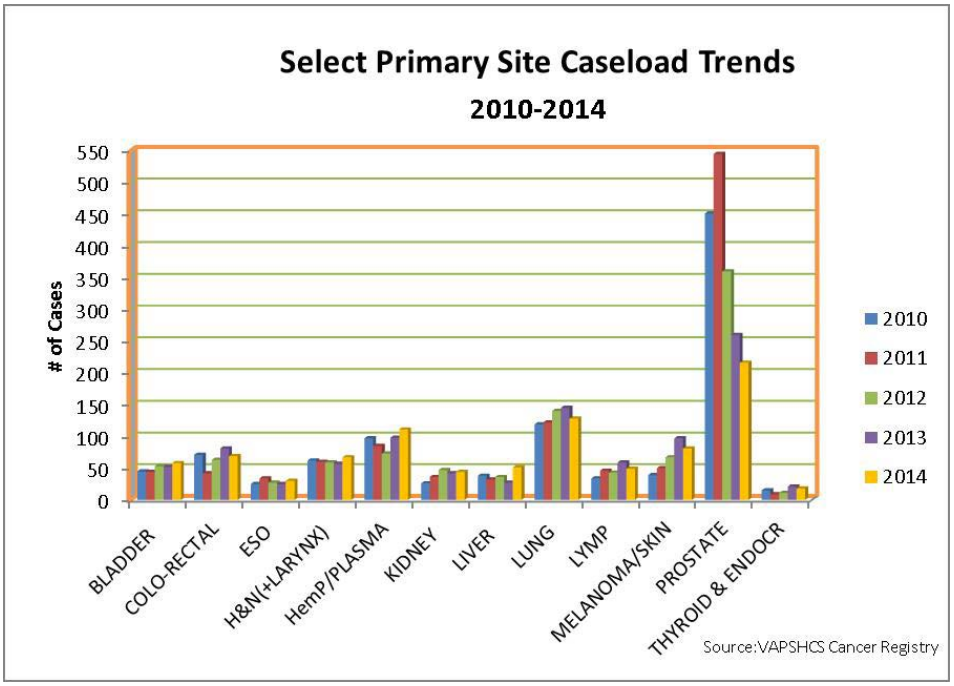
Accession: to enter a reportable cancer case following national rules and guidelines into the registry database.

Analytic Caseload: Cancer patients diagnosed and/or received first course of treatment at VAPSHCS.

American College of Surgeons (ACoS): a professional organization of surgeons and physicians founded in 1913, which has supported standards for hospitals, formation of registries, and accredits quality cancer programs nationwide through its Commission on Cancer (CoC) accreditation.

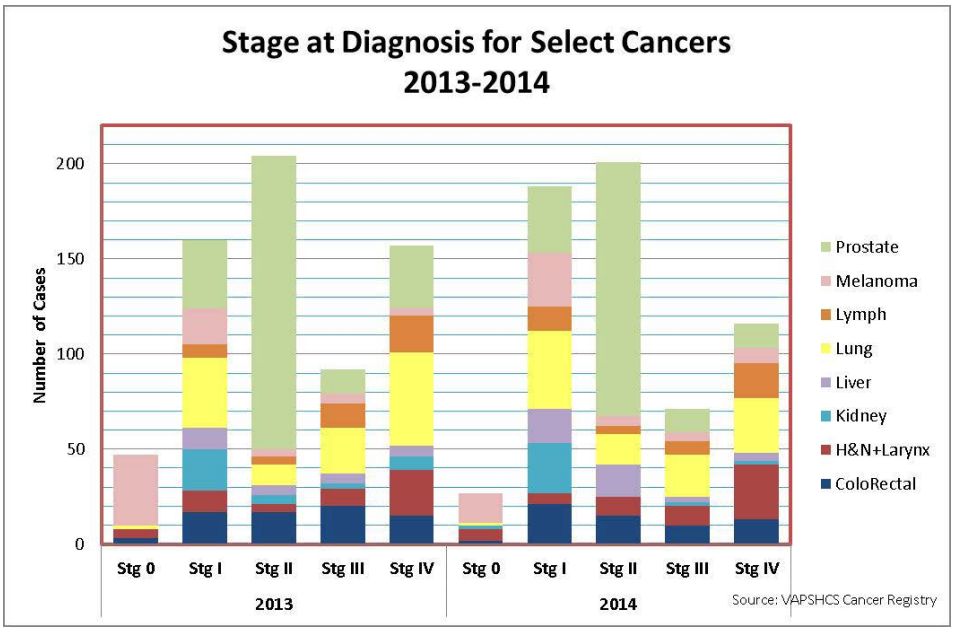
Caseload: the number of new cancer cases annually entered into a registry

CDC: Centers for Disease Control and Prevention is a federal agency of the Department of Health and Human Services.



Certified Tumor Registrar (CTR): the credentials granted to a person who has passed the cancer registry certification examination by the NCRA, and signifies specialized knowledge and education for accurate collection, recording and analysis of cancer data into registry databases.

Commission on Cancer (CoC): a division of the ACoS, consisting of over professional organizations involved in cancer control and improving survival and quality of life for cancer patients through standard-setting, prevention, research, education, and monitoring of comprehensive quality care. CoC accredited cancer programs, such as VA Puget Sound Health Care System, signifies establishment of performance measures for provision of high-quality cancer care and is nationally recog-



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Cancer Registry Report (Continued)

nized by JC (formerly JCAHO), ACS, CMS, NQF, NCI, to name a few.

CSS: Cancer Surveillance System collects population-based data on cancer incidence and survival in 13 counties in western Washington State, and is part of the Surveillance, Epidemiology, and End Results (SEER) program of the National Cancer Institute (NCI).

DUA: Data Use Agreement, as required by VA national policies for sharing of data.

First Course of Treatment: Cancer directed treatment planned and administered, usually started within four months of diagnosis or as determined by the managing physician.

NCDB: National Cancer Database is a nationwide oncology outcomes database for more than 1,400 CoC-approved cancer programs in the United States and Puerto Rico. Approximately 75 percent of all newly diagnosed cases of cancer in the United States are captured at the institutional level and reported to the NCDB.

NCRA: National Cancer Registrars Association is a not-for-profit association with a primary focus of education and certification, representing Cancer Registry professionals and Certified Tumor Registrars (CTRs).

Non-Analytic Caseload: Cancer patients who were both diagnosed and received first course cancer treatment at outside facility, and at VAPSHCS either for treatment of cancer recurrences, persistent disease, or, other reasons like pathology reports only, surveillance/follow-up only, etc.

SEER: a federally funded consortium of population-based cancer registries, established by the National Cancer Act if 1971 to collect and publish information on cancer incidence, mortality, survival and trends over time in the US.

References:

1. VA Central Office Cancer Program, http://www1.va.gov/cancer/
2. Commission on Cancer, https://www.facs.org/
3. National Institute of Health, http://www.nih.gov/
4. VHA Handbook 1605.02, http://www.va.gov/vhapublications/ViewPublication.asp?pub_ID=2858
5. American Cancer Society, http://www.cancer.org/
6. Previous Annual Reports
7. Cancer Registry Management Principles & practice, Hutchison, Menck, Et al.

Tumor Board Activities for 2015

Victoria Campa

(Compiled data is from Jan. 2014 through Oct 07 2015)

The VA Puget Sound Health Care System Tumor Board is held every Wednesday from 1:00 p.m. to 2:00 p.m. in Building 100, Room BD-152. Tumor Boards provide clinical information, pathologic staging, and treatment recommendations for the patient's disease.

The Tumor Board is composed of a multidisciplinary group of attending physicians, fellows, residents, physician assistants, nurses, medical students, and other health care professionals. Staff representatives from Medical, Surgical, and Radiation Oncology act as discussants. All surgical subspecialties are represented. Images and micrographs are presented by staff physicians from Diagnostic Radiology and Pathology. The conference provides a forum to disseminate the most current information on cancer management. The discussants review data from current publications and determine eligibility of patients for cooperative group trials sponsored by the Southwest Oncology Group (SWOG) as well as in-house clinical trials. The conferences provide continuing medical education and provide a convenient forum for expeditious management decisions of complex patients.

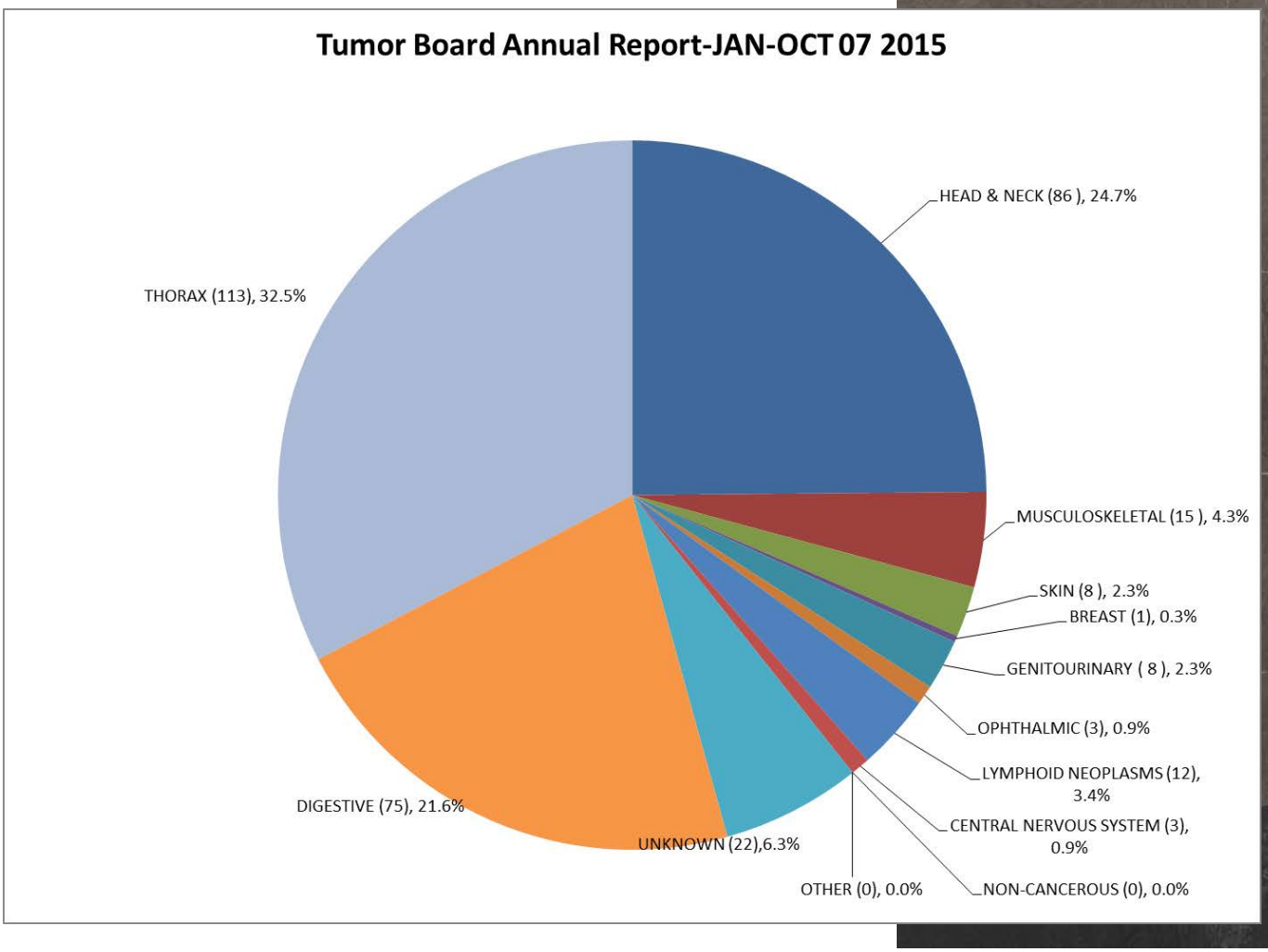
In 2015, there were 38 conferences for the year. All the major cancer sites were represented in the cases discussed. The average attendance at each conference was 23. Attendees can receive one credit hour continuing medical education category 1 per session, which can be applied toward re-licensure requirements in Washington State.

Tumor Board Activities (Continued)

All requests for Tumor Board submission shall be ordered online in CPRS on the order tab. The requesting service must complete the consult template and include a reason for the request.

All consult requests will be coordinated through Victoria Campa, Tumor Board Coordinator, Oncology Section (6-4757).

Tumor Board 2015 - Distribution of 348 Total Cases (1/1/2015 – 10/07/2015)					
HEAD & NECK	86	24.7%	CENTRAL NERVOUS SYSTEM	3	0.9%
MUSCULOSKELETAL	15	4.3%	NON-CANCEROUS	0	0.0%
SKIN	8	2.3%	OTHER	0	0.0%
BREAST	1	0.3%	UNKNOWN	22	6.3%
GENITOURINARY	8	2.3%	DIGESTIVE	75	21.6%
OPHTHALMIC	3	0.9%	THORAX	113	32.5%
LYMPHOID NEOPLASMS	12	3.4%			



Oncology Clinical Trials-

2014 final data & January through April 27, 2015 interim data

Jeannine Barton and Stephanie Magone

Clinical trials in oncology are studies that test, and often compare, treatments in a specific group of patients with a given cancer. Clinical trials define and advance best treatments for patient care. Through some clinical trials, patients may also access novel drugs for treatment of their diseases. Cancer clinical trials are therefore a vital part of the care oncology patients receive at the VA Puget Sound.

VA Puget Sound actively participates as a member institution of the Southwest Oncology Group (SWOG) and NCI-Clinical Trial Support Unit (CTSU)/NCI-National Clinical Trials Network (NCTN). Cancer patients are also offered participation in the Fred Hutchinson Cancer Research Center (FHCRC) peripheral blood stem cell (PBSC) transplant protocols. In addition, cancer patients are offered participation in appropriate pharmaceutical industry-sponsored studies with novel therapies, as well as in-house protocols. Examples of VA supported pharmaceutical industry-sponsored studies include; chemotherapy combination regimens prior to stem cell transplantation and to reduce the risk of side effects from stem cell transplantation, preventative medications to reduce chemoradiotherapy side effects, advanced stage cancer treatment options, new chemotherapy and immunotherapy treatment options for different types of cancers, and preventative vaccine studies in patients diagnosed with cancer.

Our commitment to clinical trials involves a multidisciplinary team of physicians including medical, radiation and surgical oncologists as well as physicians of other surgical and medical subspecialties. Patients with head and neck, thoracic, gastrointestinal and hematologic malignancies are discussed at the multidisciplinary tumor board and are offered clinical trial participation by the oncology research staff. Patients are only referred to VA Puget Sound approved research studies. Stem-cell transplant patients are enrolled in sponsored protocols approved by the VA Puget Sound as a part of their routine clinical care.

All patients diagnosed with cancer that are seen by a physician at VA Puget Sound are pre-screened by the Clinical Research Coordinators regarding eligibility for enrollment in a clinical trial. Once pre-screened, if a patient appears to be eligible for a clinical trial, the patient's treating Physician, Clinical Research Coordinators, and/or clinical trial Principal Investigator/Physician will present information regarding the clinical trial to the patient for their consideration of participating in the clinical trial. Information about actively enrolling clinical trials at VA Puget Sound is available in the research kiosks throughout the facility, displayed on the reader boards throughout the facility, and available on https://ClinicalTrials.gov.

In 2014 (final data), 63 cancer patients at VA Puget Sound elected to participate in clinical trials. Within these 63 enrolled patients, 9 patients enrolled in treatment related clinical trials, 18 patients enrolled in preventative treatment trials, 24 patients enrolled in quality of life trials, and 10 patients enrolled in other types of cancer related trials.

To date, in 2015 (interim data), 18 cancer patients at VA Puget Sound elected to participate in clinical trials. This percentage for clinical trials enrollment was compiled from enrollment data gathered January 1, 2015 through April 27, 2015, but may not reflect the final clinical trial enrollment data for 2015. Within these 18 enrolled patients, 4 patients enrolled in treatment related clinical trials, 11 patients enrolled in quality of life related trials, and 3 patients enrolled in other types of cancer related trials.

Hospital & Specialty Medical Care – Oncology Division

Daniel Y. Wu, MD, PhD

The VA Puget Sound Oncology Division provides initial medical diagnosis, medical treatment, and follow-up care for Veterans diagnosed with cancer. The division works closely with surgical subspecialties and Radiation Oncology to offer multidisciplinary care; and with social work, nursing, dietary, chaplaincy, and other allied healthcare services to provide holistic care. Care and treatment for cancer patients is frequently coordinated through a multidisciplinary Tumor Board. In this forum, individual cases and therapeutic options are reviewed by representatives from all services and a consensus recommendation is rendered. Oncology nurse coordinators from the Oncology Division ensure follow-up, coordinates diagnostic and therapeutic recommendations, and maintains contact with the patient. In addition, a well-staffed Cancer Care Clinic provides ongoing chemotherapeutic, transfusion, and supportive services for patients undergoing treatment.

The Oncology Division provides care in both inpatient and outpatient settings. Patients are evaluated and followed at four weekly subspecialty outpatient clinics staffed by attending physicians who are also faculties of the University of Washington and fellow physicians from the Fred Hutchinson Cancer Center. Chemotherapy and treatment related care is provided in the newly remodeled Cancer Care Clinic that operates five days per week and staffed by two physician assistants, two nurse practitioners, three to four RNs, and one clerk. This unit provides all of the outpatient chemotherapy for VA Puget Sound Health Care System patients and also offers a convenient location for outpatient procedures, such as bone marrow aspirates and physical examinations, outside of the regular outpatient clinic hours. A full-time clinical pharmacist manages chemotherapy for both inpatients and outpatients, and ensures safety of drug administration.

Recently, the Division has added a four member cancer navigation team to support patients who must travel great distances or are challenged with difficult personal issues. This navigation team, consists of a nurse practitioner, a nurse coordinator, a social worker and a clerk, maintains contact with the patient and provides throughout his/her cancer care journey. The navigation team also ensures seamless transition of the patient back to the referral facility and provider. Additionally, the team will provide survivorship counseling to patients, who have completed treatment.

The Marrow Transplant Service remains a marquee program of the VA Puget Sound Oncology Division. The Marrow Transplant Unit (MTU) is one of only three such units nationwide under the national VA program. The MTU performs approximately 50-60 transplants per year on patients referred from both remote and regional sites. The MTU works in close collaboration with the Fred Hutchinson Cancer Research Center, and the treatment and experimental protocols for transplantation are shared between the two institutions. After the acute transplant phase, the MTU performs outpatient follow-up on transplanted

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Hospital & Speciality Medical Care (Continued)

patients as well as annual long-term follow-up. The MTU is a discrete physical patient care unit with integrated outpatient and inpatient care, and a dedicated nursing and clerical support staff. The unit operates full-time and manages transplant patients 24/7.

As always, the Oncology Division supports the overall direction of the VA Puget Sound Cancer Committee, a multidisciplinary committee that maintains accreditations and promotes cancer care activities of the institution. As a part of the mission to provide Veterans with cutting edge cancer care, the Oncology Division also actively maintains a clinical research program. We provide clinical trial participation opportunities so that patients can have access to novel drugs and advanced oncological concepts. Our clinical research program participates in a number of studies through national cooperative programs and pharmaceutical sponsors; and is staffed with three clinical research coordinators. The Oncology Division additionally maintains a local cancer registry under a certified Cancer Registrar; and undergoes regular clinical and system improvement evaluations under a full-time quality improvement coordinator.

The Oncology Division is a central part of the VA Cancer Program, which has received continuous distinction as a comprehensive cancer center designated by the Commission on Cancer. The marrow transplant unit has been awarded multiple achievements and certificates of excellence by the National Marrow Donors' Program. The entire Oncology team strives daily to provide superior care to our Veterans whom have served this country with honor.

Marrow Transplant Unit

http://www.pugetsound.va.gov/marrowtransplant/Welcome.asp
Thomas R. Chauncey, M.D., PhD

The Marrow Transplant Unit at the VA Puget Sound Health Care System was founded in 1982. It operates in conjunction with the Seattle Cancer Care Alliance, Fred Hutchinson Cancer Research Center and the University of Washington School of Medicine. The San Antonio VA began performing marrow transplants in 1986, joined by the Nashville program in 1995. Together, the three VA transplant centers provide comprehensive marrow and stem cell transplantation services for Veterans with a variety of malignant and nonmalignant hematologic disorders.

Since 1982, well over 1,400 patients have been transplanted in Seattle, including over 200 from unrelated donors. Utilizing 8 inpatient beds and 1 outpatient suite, 60-70 transplants are performed yearly. Seattle patients receive infusion of marrow or peripheral blood stem cells from themselves (autologous transplantation) or from a matched or closely-matched relative or unrelated donor (allogeneic transplantation). Allogeneic transplant recipients, especially those receiving stem cells from mismatched and unrelated donor sources, require prolonged immunosuppression and are at risk for a variety of complications. Immunologic tolerance ultimately occurs with time, although close medical surveillance can be required for months to years. The longitudinal follow-up care and clinical advice provided by the Seattle program is a key element to the successful transplantation for patients throughout the country.

The largest proportion of Veterans treated in Seattle have received transplants for multiple myeloma, followed by non-Hodgkin's lymphoma, acute myelogenous leukemia (AML), Hodgkin's disease, chronic myelogenous leukemia (CML), and chronic lymphocytic leukemia (CLL). Multiple myeloma, non-Hodgkin's lymphoma and CLL can be service-connected conditions for Veterans with prior Agent Orange exposure. Other malignancies and nonmalignant hematologic disorders are considered for transplantation on a case-by-case basis.

Clinical research projects performed at the Marrow Transplant Unit in conjunction with the Fred Hutchinson Cancer Research Center have led to improved safety and efficacy of marrow transplantation, making curative treatments available to a broader number of patients. Outcome data from patients transplanted at the Marrow Transplant Unit at the VA Puget Sound Health Care System compares favorably to published data in the medical literature and national surveys.

Head & Neck Cancer Service

Marc D. Coltrera, MD and Jeffrey J. Houlton, MD

More than 60,000 Americans (and more than 900,000 people worldwide) are diagnosed with head and neck (H&N) cancer every year. Because veterans have disproportionately high rates of smoking and alcohol use, the two greatest risk factors associated with the development of H&N cancer, many of these Americans are our nation's Veterans.

At the VA Puget Sound Health Care System (VAPSHCS), cancers of the head and neck are the third most common solid tissue cancer. Our Head and Neck Cancer Service treats over 50 new cancer patients and 40 recurrent cancer patients each year, making it one of the busiest VA H&N centers nationally.

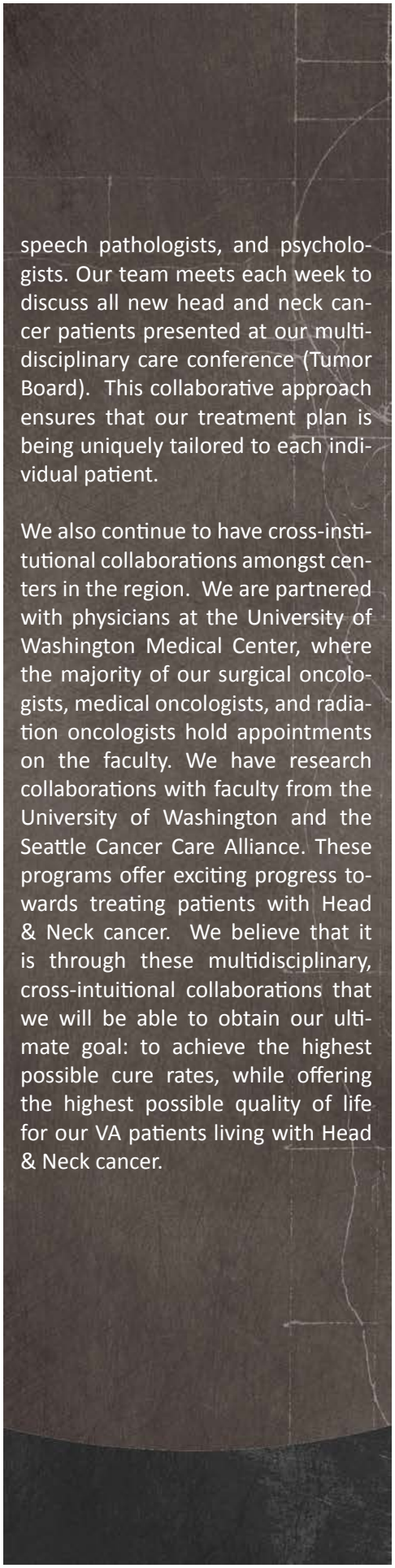
The diagnosis of these H&N cancers can have a devastating impact on our patients' lives. These cancers impair the most basic functions responsible for our daily quality of life, including: eating, speaking, and breathing. These cancers also impact our vital senses, such as taste, smell, hearing, voice, and sight. In addition, these tumors frequently distort our patients' outward physical appearance further contributing to social isolation and depression.

Fortunately, we have made significant progress in the care of patients with H&N cancer. Thanks in large part to advancements in technology, novel surgical techniques, and organ-sparing treatments (which take advantage of novel equipment and treatment protocols), we have made remarkable improvements in the quality of our patients' lives during and after treatment.

At the VAPSHCS, we are one of a small select number of VA centers that perform microvascular free tissue reconstruction for defects following head and neck cancer resections. These microvascular techniques provide our patients with the highest form and function achievable following tumor removal. In addition, we offer our laryngeal cancer patients larynx-sparing trans-oral laser surgery, an alternative to total laryngectomy. This microscopic surgical technique allows our patients to preserve the majority of their larynx, maintaining both their voice and the ability to breath without a stoma. Our newest surgical advancement involves trans-oral robotic surgery. Robotic surgery is an exciting new technology that allows tumors of the tonsils and base of tongue to be removed through the mouth rather than through a more extensive open operation. When used appropriately, this technique seems to spare patients intensive chemotherapy and radiation which was previously the standard of care for treatment of these tumors (given the morbidity of open operations). Reduction in chemotherapy and radiation may have an important impact on our patients swallowing function and overall quality of life.

By offering the complete gambit of oncologic and reconstructive surgical options, we at the VAPSHCS H&N program distinguish ourselves as one of only a very few select centers with the ability to offer patients all state-of-the-art treatment options available. Even so, the most important aspect of our H&N cancer care continues to be our ability to work as a focused multidisciplinary team. Our H&N team consists of surgical, medical and radiation oncologists, neuroradiologists, nurse practitioners, nurses, social workers, speech pathologists, and psychologists. Our team meets each week to discuss all new head and neck cancer patients presented at our multidisciplinary care conference (Tumor Board). This collaborative approach ensures that our treatment plan is being uniquely tailored to each individual patient.

We also continue to have cross-institutional collaborations amongst centers in the region. We are partnered with physicians at the University of Washington Medical Center, where the majority of our surgical oncologists, medical oncologists, and radiation oncologists hold appointments on the faculty. We have research collaborations with faculty from the University of Washington and the Seattle Cancer Care Alliance. These programs offer exciting progress towards treating patients with Head & Neck cancer. We believe that it is through these multidisciplinary, cross-intuitional collaborations that we will be able to obtain our ultimate goal: to achieve the highest possible cure rates, while offering the highest possible quality of life for our VA patients living with Head & Neck cancer.



Radiation Oncology— Continuous Quality Improvement Through Technological Advances and Upgrades

Tony S. Quang, MD, JD, Adam Tazi, PhD, and Kent E. Wallner, MD

The VA Puget Sound Health Care System is a radiation oncology referral center in the Veterans Affairs system, which is the first radiation oncology facility in the State of Washington accredited by the American College of Radiology. It provides cancer care for patients from the VA Northwest Health Network 20 which serves Alaska, Idaho, Oregon and Washington. We deliver state-of-the art care to patients diagnosed with various malignancies.

Technological advances and upgrades are actively implemented and every opportunity is seized to streamline the cancer care delivery process. This effort is spear-headed by the radiation oncologists—Tony S. Quang, MD, JD and Kent E. Wallner, MD, physicists Adam Tazi, PhD and Carl Bergsagel, MS, and dosimetrists Sharon Hummel-Kramer, CMD, ARRT(T) and David Cain, CMD, ARRT(T). This effort is not only founded in best clinical practice, but fortified with interdisciplinary robustness.

Since January 2015, for treatment motion management, we implemented 4D CT simulation for most of our early stage medically inoperable lung cancer patients to treat lesions with tighter treatment margins to increase tumor control and decrease treatment toxicities. The Pinnacle radiation treatment planning system has been upgraded to version 9.8. Elekta Synergy treatment machines now include on board imaging XVI system upgraded to version 5.02.

Our bone marrow stem cell transplant program is unrivaled with the implementation of safer and less toxic myeloablative and non-myeloblative regimens both in clinical and research settings. In June 2015, we re-commissioned Elekta Synergy 1 linear accelerator to treat patients with high energy photons, 18 MV instead of 6 MV, for better dose uniformity. In October 2015, we started treating total body irradiation patients with 18 MV.

Furthermore, we have started to upgrade the most up-to-date version of the electronic medical record— MOSAIQ Management System to version 2.6 by upgrading the two sequencers which would allow us to perform automatic table movement when using kV-pair for planar imaging. Implementation of this latest version would also allow for automated scripting and an additional layer of treatment verification and quality assurance which meets national standards.

While intensity modulated radiation therapy (IMRT) continues to be used to treat head and neck, prostate, lung, and rectal cancers, volumetric modulated art therapy (VMAT), a faster and better technique of radiation therapy delivery, is being commissioned. This process involves reconfiguring our treatment planning to treat with Smart Arc and validating the planned dose versus delivered dose with the Arc Check Phantom. We have also gotten approval to obtain extra network space for Pinnacle so we can plan complex cases using Smart Arc, which requires more space for complex plan calculations like for head and neck cancers. In September 2015, we commissioned Pinnacle Treatment Planning System to plan with Smart Arc. We will start VMAT treatment delivery in mid-2016.

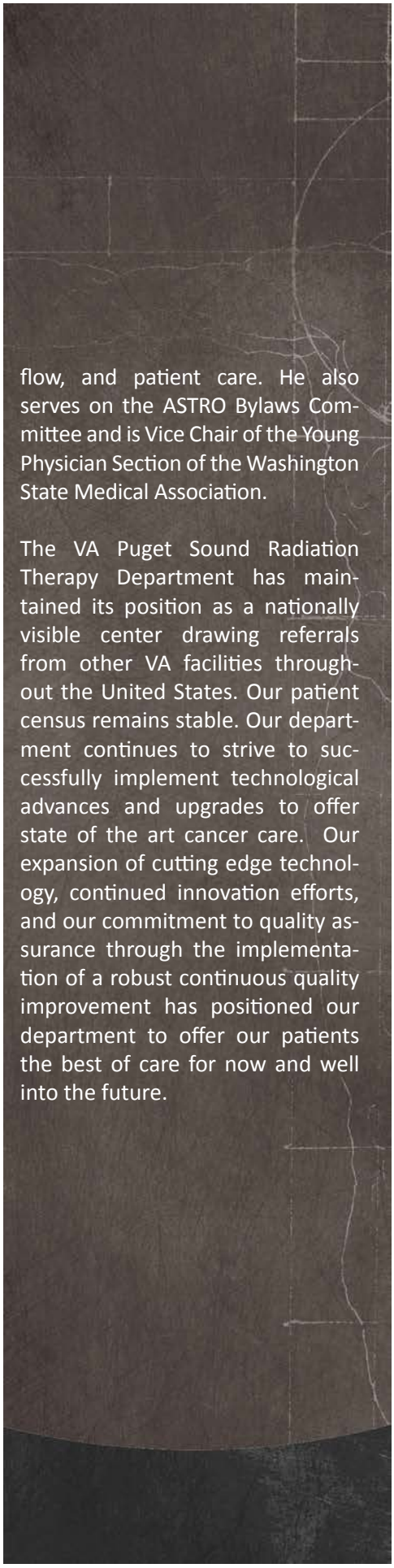
Dr. Quang, Dr. Wallner, Dr. Tazi, Mr. Bergsagel, Ms. Sharon Hummel-Kramer, and Mr. Cain continue to improve clinical and technical treatment precision by optimizing protocols for dose-volume constraints and cone beam CT imaging to include specific treatment sites. Ms. Hummel-Kramer and Dr. Quang worked with resident physician, Michael Gensheimer, MD to develop a mathematical model predicting success in parotid gland sparing for head and neck IMRT treatment planning. This algorithm adds efficiency as it predicts success in planning allowing both the dosimetrist and the radiation oncologist to have reasonable expectations of parotid sparing. The findings were presented at the 55th ASTRO Annual Meeting in Atlanta, Georgia in 2014, and the full manuscript was subsequently published in the Medical Dosimetry journal. Currently, Drs. Quang and Wallner are working with resident physician, Patrick Richard, MD, MS and Ana Fisher, LICSW, OSW-C

on a research project to examine psychosocial factors based on the NCCN Stress Thermometer For Patients.

We continue to perform solid continuous quality improvement including interdisciplinary chart rounds, outcomes studies, focus studies, and peer review. On a weekly basis, we have incorporated the review of CT and MV imaging as part of our weekly rounds to monitor patient set up. Drs. Quang and Wallner are active participants at weekly Tumor Board meetings where patients are offered the optimal management recommendations through an interdisciplinary effort. Dr. Quang runs monthly clinical case conferences while Dr. Wallner runs monthly journal clubs teaching residents at University of Washington Medical Center. They are Visiting Oncology Lecturers at Bellevue College teaching clinical oncology to radiation therapy students. Students from this training program have consistently over the years scored in the 90th to 95th-percentile.

As a national authority on the quality assurance effort of other VA brachytherapy programs, Dr. Wallner has pioneered a specialty clinic in the administration of seed brachytherapy for prostate cancer patients. Our clinic continues to offer brachytherapy to prostate cancer patients who come from every region of the United States. We have integrated brachytherapy with a prostate cancer program that includes IMRT with placement of gold seed fiducials for image guided radiation therapy (IGRT). Using a shorter course— hypofractionated radiation therapy treatment has allowed patients to complete their treatment quicker so they can go back home.

Radiation Oncology continues to play a strong leadership role in the VA system. Dr. Quang was recently elected as Board Member to the Association of VA Hematology/Oncology, an organization with members who are interested in advocating and promoting cancer care of Veterans. Dr. Quang also presented the VA Larynx II Hypofractionation protocol highlights at the AVAHO Annual Meeting in Washington, DC. Dr. Quang provides our VA with up-to-date scientific and best clinical practice expertise in his respective roles as Co-Chair on the VA Institutional Review Board and Surveyor for the American College of Radiology. He also serves as the VA Institutional Principal Investigator for the Southwest Oncology Group (SWOG). Dr. Quang continues to be an active member of the Integrating Healthcare Enterprise in Radiation Oncology (IHE-RO) planning and clinical advisory committees. IHE-RO works in collaboration with the American Society for Radiation Oncology (ASTRO), which addresses ways to improve the use of computer systems for information sharing, work flow, and patient care. He also serves on the ASTRO Bylaws Committee and is Vice Chair of the Young Physician Section of the Washington State Medical Association.



The VA Puget Sound Radiation Therapy Department has maintained its position as a nationally visible center drawing referrals from other VA facilities throughout the United States. Our patient census remains stable. Our department continues to strive to successfully implement technological advances and upgrades to offer state of the art cancer care. Our expansion of cutting edge technology, continued innovation efforts, and our commitment to quality assurance through the implementation of a robust continuous quality improvement has positioned our department to offer our patients the best of care for now and well into the future.

Lung Cancer Outcomes and Surveillance

Tamarind Keating, ARNP, MPH

Lung cancer is the second most common cancer among Veterans. An average of 130 cases of lung cancer are diagnosed each year in Veterans receiving care at the VAPSHCS.[1] Veterans are at higher risk for lung cancer compared to civilians, with studies estimating rates to be 25-76% higher than the national average.2-4 Reasons for this include a higher prevalence of tobacco use as well as occupational exposures such as Agent Orange, asbestos, diesel fuels, and oil fires.

Between 2010 and 2013, 443 cases of lung cancer were diagnosed or treated at VAPSHCS. At the time of diagnosis, 95 (21%) of Veterans had stage I cancer, 46 (10%) had stage II, 110 (25%) had stage III and 192 (44%) had stage IV lung cancer. [1]

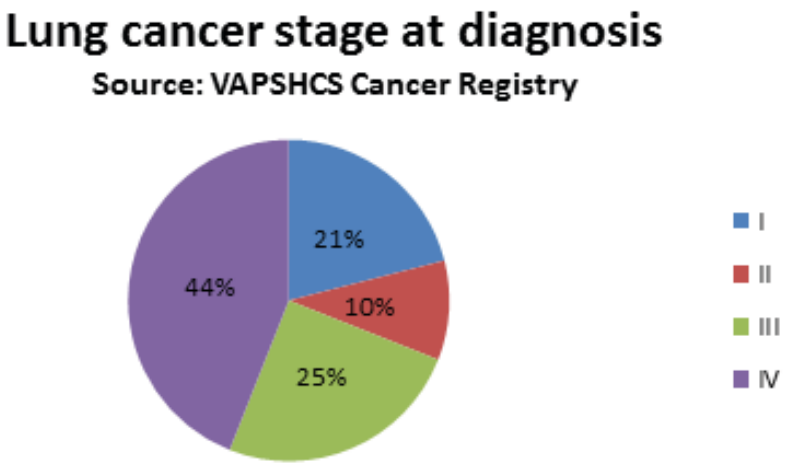
The cancer stage at diagnosis is a major factor in predicting survival; roughly 35% of Veterans with stage I or II cancer will be alive in five years, compared to just 7% and 1% of Veterans diagnosed with stage III and IV lung cancer, respectively. [1]

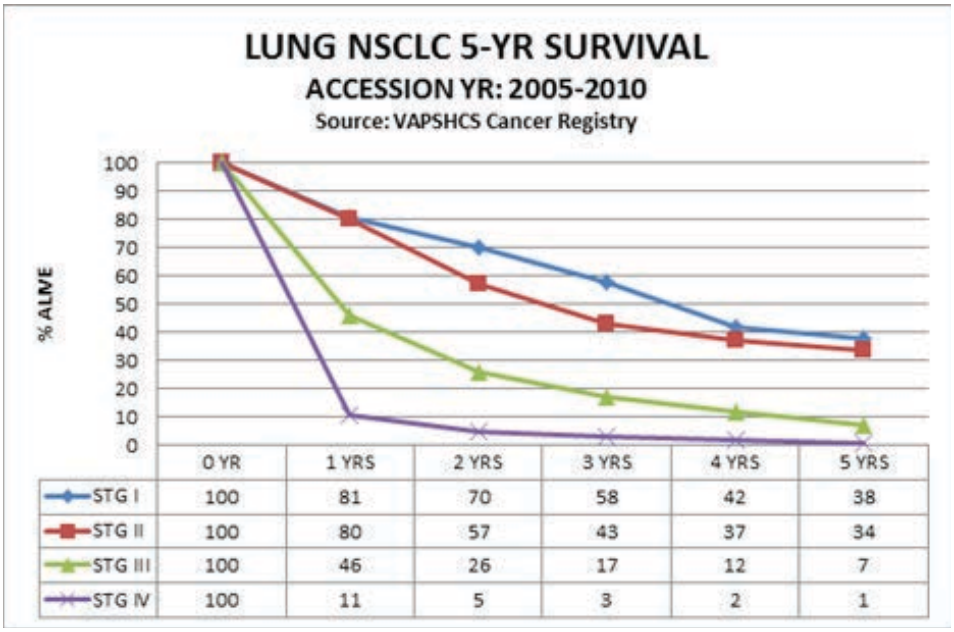
Surveillance for cancer recurrence

Patients have a 13-20% cumulative risk of developing a second primary lung cancer in their lifetime.[5] If caught at an early stage, roughly half of these patients can undergo curative therapy with a three year survival rate of 48%.[6] Multiple agencies have developed evidence-based guidelines for surveillance following treatment, however it is not always clear which medical provider or service is responsible to ensuring surveillance is completed and guidelines can be difficult to access and implement for providers who do not routinely coordinate this care.

To investigate whether Veterans received appropriate surveillance following treatment of lung cancer, chart reviews were conducted for 44 Veterans diagnosed with stage I, II, or IIIA lung cancer and treated at VAPSHCS. Based on the guidelines from the National Comprehensive Cancer Network that recommend imaging with a chest CT scan every 6 months for the first two years post treatment, then annually, the study defined compliance as completing a chest CT scan within 4-8 months of treatment completion. Almost half (43%) of Veterans did have appropriate screening, 14% had no CT scan performed in this time period, and the remainder had scans performed too early or too late.[7]

Of interest, Veterans were more likely to have a CT scan performed in the appropriate follow up period when they were followed at the VAPSHCS compared to those receiving follow up care at other sites.[7] CT scans were most fre-

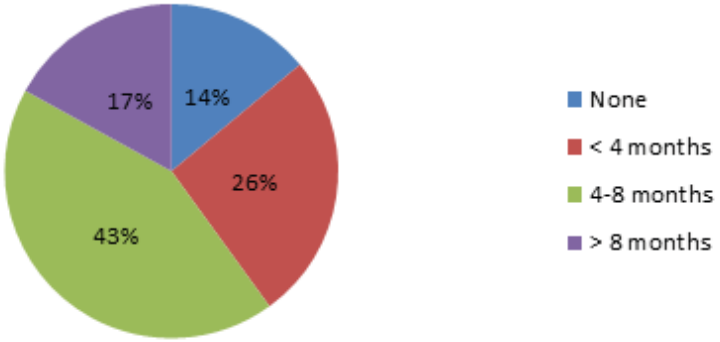




	0 YR	1 YRS	2 YRS	3 YRS	4 YRS	5 YRS
STG I	100	81	70	58	42	38
STG II	100	80	57	43	37	34
STG III	100	46	26	17	12	7
STG IV	100	11	5	3	2	1

Timing of first surveillance CT scan for lung cancer survivors

Source: Dr. Leah Backhus, private communication



quently ordered in the correct time interval by surgeons or primary care providers, compared to oncologists or other types of primary care providers. [7]

This data favorably compares to a large study that assessed the same question in a SEER-Medicare data set and found that only 25% of patients treated with definitive therapy for lung cancer had their first surveillance CT at the appropriate time interval.[8] There is clearly room for improvement however, particularly for Veterans who will have their surveillance performed at other sites within VISN 20.

References

1. Puget Sound VA Health Care System Cancer Registry.
2. Dall, TM; Zhang, Y; Chen, YJ; et al. Cost associated with being overweight and with obesity, high alcohol consumption, and tobacco use within the military health system's TRICARE prime-enrolled population. Am J Health Promot 2007; 22: 120-139.
3. Helyer, AJ; Brehm, WT; Perino, L. Economic consequences of tobacco use for the Department of Defense, 1995. Mil Med 1998; 163: 217-221
4. Harris JE. Cigarette smoking practices, smoking-related diseases, and the costs of tobacco-related disability among currently living U.S. Veterans. Report Commissioned by the Department of Veterans Affairs Assistant Secretary for Policy and Planning. 1997.
5. Johnson, BE; Cortazar, P; Chute, JP. Second lung cancers in patients successfully treated for lung cancer. Semin Oncol 1997; 24: 492-499.
6. Van Meerbeeck, J; Weyler, J; Thibaut, A; et al. Second primary lung cancer in Flanders: frequency, clinical presentation, treatment and prognosis. Lung Cancer 1996; 15: 281-295.
7. Backhus, L. Private communication.
8. Backhus, L; Farjah, F; Zeliadt, SB; et al. Predictors of imaging surveillance for surgically treated early-stage lung cancer. Ann Thorac Surg 2014; 98: 1944 – 1951.

Diagnostic Imaging Service (DIS)

Julie Takasugi MD and Joseph G Rajendran, MD

Diagnostic radiology and nuclear medicine are important fields in detection, diagnosis, treatment and follow up of a variety of diseases, including malignancies. Diagnostic Imaging Services (DIS) is responsible for the performance of quality examinations, interpretation of those examinations and for the communication of study results to the referring clinician in a timely fashion. At the VA Puget Sound Health Care System (VAPSHCS), Seattle and American Lake Divisions, there are 8 receptionists/schedulers, 2 program support persons, 1 administrative officer, 2 PACS administrators, 3 file clerks, 2 health technician/escorts, 50 radiologic/nuclear medicine technologists, 5 technology students, 1.5 FTE Nurse Practitioners, 1 nurse, 8 residents, 2 fellows, 9 full-time and 2 part-time attending physicians. Attending radiologists subspecialize in abdominal imaging, cardiothoracic radiology, gastrointestinal radiology, neuroradiology, musculoskeletal radiology, nuclear medicine (diagnosis and therapy) or vascular and interventional procedures.

Services provided by DIS include conventional radiographic exams, fluoroscopic studies of the gastrointestinal and genitourinary tracts and nervous system, computed axial tomographic (CT) scans, ultrasound exams, magnetic resonance imaging (MRI), angiography and radionuclide studies. Modern CT, SPECT/CT and PET/CT scanners have been installed. The current PET/CT is a collaborative effort with R&D in providing clinical PET scan capability at VAPSHCS and we have started of with 18F-fluorodeoxyglucose imaging. Mammography is performed at Virginia Mason, UW, and other local imaging centers that are accessible to patients. Percutaneous biopsies, aspiration and drainage of fluid collections, biliary and genitourinary drainage, long-term intravenous catheter placement, percutaneous feeding tube placement, tumor embolization and ablation procedures, intra-arterial chemotherapy access and intravascular stent placement are some of the diagnostic and therapeutic procedures offered by this department. In nuclear medicine, all general nuclear imaging studies including myocardial perfusion studies, brain SPECT imaging (including DAT scan), In-111Octreotide and I-123MIBG scans and lymphoscintigraphy are performed. A modern SPECT/CT (16 slice) scanner and PET/CT scanner (16 slice) were installed at SEA. Therapy with radiopharmaceuticals is routinely performed for hyperthyroidism, thyroid cancer (using Iodine 131) and bone pain palliation (using Strontium 89 and Samarium 153). Radioimmunotherapy (with Yttrium 90 Ibritumomab tiuxetan) for treating non-Hodgkins lymphoma and Ra-223 dichloride therapy for metastatic prostate cancer . VAPSHCS continues to provide teleradiology service for the interpretation of nuclear medicine studies performed at Spokane VA Hospital. In addition, DIS supports a number of committees and conferences dealing with cancer patients at its Seattle Division, including Tumor Board, Cancer Committee, Tumor Registry, Gastroenterology-Surgery Conference, Neurology/Neuro-Surgery Conference, Liver tumor conference,Genitourinary Conference and Radiation Safety Committee. In 2015, a total of 98,000 radiologic examinations were performed at the VAPSHCS. Diagnostic Imaging also provides consultation on studies performed at outside hospitals and teleradiology services for other VA hospitals in VISN20.

Urologic Oncology Program

Bruce Montgomery, MD and Michael Porter, MD

The multidisciplinary Urologic Oncology program is designed to help patients with genitourinary cancers of all types and give them the opportunity to discuss their therapeutic options with a broad range of care providers who treat patients with this disease, including urologists, radiation oncologists, medical oncologists endocrinologists, advanced registered nurse practicioners, specialty trained nurses, and physical therapists. By providing this type of integrated patient care, doctors hope to help patients make informed decisions and receive the best possible treatment. The multidisciplinary team offers some of the most advanced treatment options available for prostate cancer, including nerve sparing prostate surgery, brachytherapy (radiation implants), adjuvant chemotherapy, the latest options in hormonal therapy, and advanced disease chemotherapy studies. The center is one of a select few VA centers in the country utilizing the DaVinci robotic system to perform prostatectomies. We also offer cutting edge treatment options for kidney and bladder cancer, including robotic partial nephrectomy, laparoscopic nephrectomy, energy based ablative techniques for small renal tumors, radical cystectomy with urinary diversion for muscle invasive bladder cancer, and adjuvant therapies for non-muscle invasive bladder cancer including chemotherapy placed into the bladder. Finally, we offer continuing care of urologic cancer survivors which includes management of long term side effects of cancer therapy including erectile dysfunction and urinary symptoms. We are a cancer referral center for all of VISN 20 and also provide comprehensive care for cancers that are more uncommon in the Veteran population, including testis and penis cancer. The Program actively participates in cutting edge research, and offers ongoing trials in bladder cancer treatment and active surveillance of prostate cancer. For information, contact the Oncology Department at (206) 764-2709 or the Urology Department at (206) 764-2265

Gastroenterology and Hepatology

Jason A. Dominitz, MD, MHS; Haritha Avula, MBBS; George Ioannou, MD, MS

Cancers of the digestive system constitute a significant portion of the cancers diagnosed and treated at the VA Puget Sound Health Care System (VAPSHCS). Increased awareness and compliance with colorectal cancer screening, as well as the rising incidence of hepatocellular carcinoma, esophageal and pancreatic adenocarcinoma, have resulted in ever-increasing numbers of procedures performed for the screening, surveillance, diagnosis, and treatment of these cancers at our facility.

Procedures offered at the VAPSHCS include liver biopsy, esophagogastroduodenoscopy (EGD), sigmoidoscopy, colonoscopy, capsule endoscopy, endoscopic retrograde cholangiopancreatography (ERCP). Endoscopic ultrasound (EUS) is also available to Veterans needing tissue acquisition for the diagnosis of cancer, as well as for cancer staging. Other procedures include endoscopic palliation of malignant obstruction (e.g. esophageal, duodenal, biliary or colonic obstruction), in addition to percutaneous endoscopic gastrostomy for nutritional support. There are now nine full-time staff gastroenterologists/hepatologists, two nurse practitioners, and a superb team of nurses on staff at the Seattle and American Lake campuses. Gastroenterology and Hepatology providers participate in weekly multidisciplinary conferences for the management of malignancies (e.g. Tumor Board and Liver Tumor Conference).

All staff physicians at the VAPSHCS hold faculty positions at the University of Washington and the GI team usually includes fellows, residents and medical students from the University. Members of our GI Section are also actively involved in investigation relevant to cancer, including basic (e.g. DNA methylation & carcinogenesis), translational (e.g. screening tools), and clinical (e.g. screening, diagnostic and treatment strategies) research. They also collaborate with the research programs of many other departments within the VAPSHCS, the Fred Hutchinson Cancer Research Center and the University of Washington.

Nutrition and Cancer

Amanda Kusske, MS, RD and Stephanie Crabtree, MS, RD, CNSC

Nutrition is essential in contributing to optimal outcomes in patients undergoing cancer treatment. Eating well during cancer treatment can help patients maintain strength and energy, decrease their risk of infection, and reduce the side effects from treatment. Patients undergoing cancer treatment can experience numerous side effects that can adversely affect their ability to maintain proper nutrition: nausea, vomiting, early satiety, diarrhea, taste and/or smell changes, difficulty with swallowing, and loss of appetite. Weight loss can result from these side effects and can put patients at higher risk of hospitalization, and potentially delay surgery.

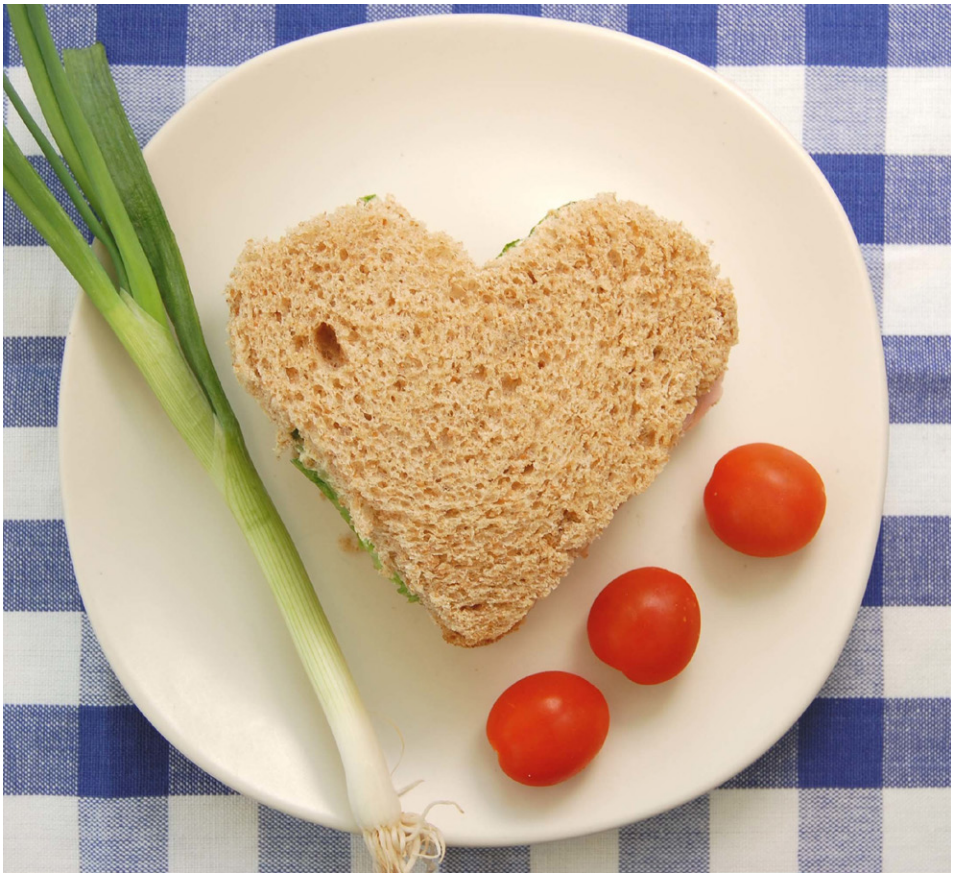
Nutrition and Food Services at VA Puget Sound Health Care System provides nutrition education and counseling by Registered Dietitians to Radiation Oncology, Cancer Care Clinics, Marrow Transplant Unit patients and their caregivers on an individual and group basis. Topics of evidence-based education and counseling include weight management, food safety, cancer reoccurrence prevention, basic healthy eating, Diabetes education, and symptom management. Many patients will require a feeding tube to maintain nutrition and hydration during and after cancer treatment. The dietitian provides tube feeding formula recommendations to patients and providers, provides instruction on feeding and hydration, utilizing feeding pumps, and monitors tube feeding tolerance and progression.

Many patients undergoing Bone Marrow Transplants may require total parenteral nutrition (TPN) during their treatment. In this case, the dietitian provides TPN recommendations and monitors patients' nutritional status throughout the transplant process. The dietitian in the bone marrow transplant unit is nationally certified in nutrition support to ensure all patients on TPN are appropriately monitored based on the most recent research and recommendations. In addition,

Nutrition and Cancer (Continued)

the dietitian provides guidance and policy oversight to the provision of high quality patient food service.

Our Nutrition Support Team, (NST) continues to meet weekly to discuss high risk patients, current articles, and to make sure that we are all utilizing the most current evidenced based nutrition practices. Our team includes several Clinical Dietitians, Doctors from GI and Surgery, and a Pharmacist as available. We also continue to work closely with Pharmacy as we are enjoying the ability to customize our TPN working to prevent complications associated with over or under feeding. This year, we established a Nutrition Oncology consult to better manage the referral of veterans to our two outpatient nutrition clinics for Radiation Oncology and Cancer Care. This has been very beneficial in helping to meet the growing needs of nutrition education, dietary counseling, weight monitoring, and nutrition support management in this high risk population. We have also had a greatly anticipated update on our VISN 20 Outpatient Enteral and Oral Nutrition Supplement Products Policy, which allows Clinical Dietitians to prescribe oral supplements for outpatients who meet specific malnutrition or disease criteria or who are undergoing certain pre-surgical evaluation and preparation.



Whole Health: providing patient-centered, personalized and integrative care to Veterans with cancer.

Dr. Leila Kozak, Clinical Champion OPCC & CT, VAPSHCS

Whole Health is VA's own model of patient-centered, personalized and integrative care has been rolling out throughout VA facilities nationally since 2013. VAPSHCS hosted the Whole Health Clinical Course at American Lake Division on January 2015, with more than 45 staff and leadership attending the course. Groups formed through the course continue to work to advance implementation of patient-centered care at VAPSHCS. In addition, the monthly Integrative Health group meeting has now 100 + staff members and continue to grow. Among IH attendees we have William Campbell MD, our Chief of Staff, and Gary Bayne MSN, our Director Nursing, who have been instrumental in supporting Whole Health at VAPSHCS. You can read more about VA's Whole Health at http://www.va.gov/PATIENTCENTEREDCARE/about.asp.

At the core of providing Whole Health to our Veterans and families is the onsite availability of integrative therapies – complementary modalities that have been shown to support symptom management and enhance wellness. At VASCHCS, we have been working diligently to increase implementation of the Personalized Health Planning (PHP) as well as availability of integrative health modalities for all Veterans. As an active member of the Puget Sound Patient-Centered Care Board, the VISN 20 Patient and Family-Centered Committee and a Clinical Champion for the Office of Patient Centered Care and Cultural Transformation (OPCC & CT) at VACO, I work locally, regionally and nationally to advance education in Whole Health and promote implementation of and wide access to integrative health modalities and Whole Health practice approaches. I am committed to advancing Whole Health implementation at Puget Sound by supporting the expansion of integrative modalities currently available through cancer and palliative care services.

At Puget Sound, Veterans already have access to a variety of integrative health classes including mindfulness meditation, yoga and tai chi, as well as other modalities offered through Primary Care/Mental Health and Health Promotion and Disease Prevention. Current patient education opportunities are posted at regularly updated and posted at http://www.pugetsound.va.gov/monthview.asp?thisMonth=10&thisYear=2015.

One of the current programs we have available for cancer care at Puget Sound is the "Touch, Caring & Cancer" (TCC) Program (www.partnersinhealing.net). TCC was originally tested at VAPSHCS in 2012-2013. Results from the study showed that the program helped decrease pain, anxiety and fatigue in Veterans with cancer. In addition, caregivers who learned to provide massage benefited too, feeling more confident about their ability to support their partner during cancer treatment and reporting an increased sense of closeness in their relationship, nurtured by the massage practice. Veterans and their caregivers were highly satisfied with this program (Kozak et al, 2013). Thanks to our OPCC funding, VAPSHCS has received copies of this award-winning multimedia program -

currently available for free to any Veteran and their spouse/caregiver at VA Puget Sound Cancer Care through Oncology Social Work.

Integrative Therapy Tool-Kits for Whole-Health Implementation

We recently completed a series of implementation toolkits and educational videos (available through TMS) for Healing Touch, Touch Therapies and Massage Therapy. This project was possible through a collaboration among 20 VA hospitals and CLCs from 6 different VISNs, and developed materials to support implementation of integrative health modalities at Puget

Sound as well as other VA facilities nationally. We were recently selected to present our project at the 2015 Planetree International Conference. This conference, that was attended by more than 800 hospital staff and administrators, highlights excellence in improving the patient experience at hospitals around the globe.

The videos developed showcase successful implementation of Touch Therapies and Massage Therapy at various facilities and developed a basic massage training for VA staff. An implementation toolkit with all the resources necessary to successfully implement Touch Therapies and Massage Therapy at VA facilities is available along with the video resources. The Implementation Toolkit will be uploaded as a resource within the TMS course as well as available through the Health for Life website http://healthforlife.vacloud.us/. Videos include:

- Touch Therapies and Massage Therapy at VA Facilities video - web-based on demand TMS course with 1 hour CE credit. You can preview this video at http://bcove.me/lin-1jpr8.
- Touch Therapies and Massage Therapy at VA Facilities video – a 19 minute video showcasing the voice of Veterans, staff and leadership from facilities that have successfully implemented touch therapies and massage therapies at the VA. You can preview this video at http://bcove.me/vw3jjotp.
- Basic Massage Skills for Training VA Staff (Chapters 1-8) - This series of 8 short videos and a descriptive guide are intended to train VA clinical staff who are interested in including touch therapies within their clinical encounters. The techniques were demonstrated by Allison Mitchinson, MPH LMT NCTMB, Massage Program Supervisor and Lead Massage Therapist at Ann Arbor VAMC, who has been a pioneer in developing a long-standing and successful touch therapies/massage therapy program at Ann Arbor VA since 2007.

Whole Health Education

Whole Health is VA's own model of patient-centered care. Developed through partnerships with Planetree (www.planetree.org) and the Department of Integrative Medicine at the University of Wisconsin/Madison, these national contracts have helped shaped VA's approach to delivering Veteran-centered, personalized and integrative care.

Whole Health focuses on:

- Changing the conversation with

(Continued on next page)

Veterans and families from "What is the matter with you" to "What matters to you?
- To "change the conversation," we are using new tools that help clinicians develop a "Personalized Health Plan" that is centered on each Veteran's personal vision of health.
- The "Components Of Pro-Active Health & Well-Being" help the Veteran become aware of the different areas that may be affecting their sense of health and well-being and where they feel it is important to initiate according to their preferences and priorities

You will find more detailed information about these tools, as well as the Whole Health curriculum at http://healthforlife.vacloud.us/index.php/education/2015-01-06-16-30-49

Patient-centered care's role in cancer care

Patient-centered care (PCC) is care that places the "patient at the center" and considers the patient as a whole – physical, psychological, social and spiritual being. PCC implies changing the way we offer medical care by emphasizing not only state of the art medical interventions but also on providing the best supportive environment that promotes healing. This is usually referred to as enhancing the "patient experience."

The patient experience of care has been shown to have a great impact on healing outcomes. Currently, hospitals around the country (VA and non-VA) consider the patient experience a new specialty and have developed a "Patient Experience Officer" position that attends to enhancing the patient experience at hospital facilities.

The "patient experience" is nurtured by two core principles of PCC - Healing Environments and Healing Relationships as well as by the integration of integrative health modalities that enhance wellness and provide psychosocial-spiritual support. Healing environments and healing relationships support cancer patients by providing the nurturing environment where they feel seen as people, not just as a disease.

- Healing Environments refers to transforming the physical environment of care in a nurturing, supportive space that is conducive to healing. Healing environments are created through the use of Evidence-Based Architectural Design principles. "Evidence-Based Design" is a field that emphasizes research evidence to guide the design of healthcare spaces indoors and outdoors. Studies have shown that certain architectural design features can improve patient and staff well-being, support healing, promote stress reduction and enhance safety. For example, designs that incorporate natural light, colors, art installations and views of nature promote healing and improve outcomes in health care. The use of relaxing music and aromatherapy has been shown to improve mood and decrease stress/anxiety in patients as well as employees.
- Healing Relationships refers to creating relationships between patients and providers and among staff that reflect trust, hope, and a "sense of being known" (Scott et al, 2008). Emotional self-management (emotional intelligence) and mindfulness are competencies that have been found to be key facilitators in healing relationships. The Whole Health curriculum provides resources for staff to enhance awareness of emotional self-management and mindfulness, so they may model these to patients and in that manner, foster healing relationships within healthcare.

For Whole Health to take roots and provide its full benefits, everyone involved in the health care system needs to have the skills to provide supportive, patient-centered, holistic care. A welcoming smile or a helping hand, atrium space with live plants or a view of the mountains, a quiet space to pray or meditate, every detail affects a patient's experience and contributes directly to his/her health and well-being. To access the Whole Health curriculum, VA staff can visit http://healthforlife.vacloud.us/index.php/research-education/education/.

Why is Whole Health so relevant to cancer care?

Integrative therapies have an important role in cancer and palliative care,

providing a wide range of benefits. Touch/Massage Therapies, Healing Touch, Yoga, Tai Chi and meditation are examples of evidence-based complementary interventions widely used in cancer care around the country and abroad. Because of their evidence in decreasing pain and anxiety and improving quality of life, they are increasingly offered to cancer patients and their families to improve symptom management.

The Whole Health approach to care includes these modalities as part of the wellness strategies that need to be available for patients and families to support them through cancer treatment and palliative care. Other modalities widely used that can be incorporated into cancer care include acupuncture, guided imagery, hypnosis, music and art therapy, and animal-assisted therapies. For more information on how other VA facilities have embraced Whole Health (including within cancer and palliative care services) please visit http://healthforlife.vacloud.us/index.php/research-education/education/

The role of integrative health modalities in cancer care has been recognized across comprehensive cancer care centers nationally and internationally. As the evidence for the the use of integrative therapies in cancer care grew, top cancer care centers such as Memorial Sloan Kettering, MD Anderson and Dana-Farber Cancer Center have been developing on-site Integrative Oncology Services for the last 10 years. With our official rolling out of the Whole Health Curriculum at VAPSHCS in January 2015, our facility is one step further in bringing integrative cancer care to our Puget Sound Veterans.

Now entering my 5th year as a Clinical Champion for OPCC, I look back and see the amazing progress we have been doing at Puget Sound during the last 4 years as well as the exciting opportunities ahead to continue the integration of Whole Health into cancer and palliative care.

References

Kozak L, Vig E, Simmons C, Eugenio E, Collinge W & Chapko M. (2013) A Feasibility Study Of Caregiver-Provided Massage As Supportive Care In VA Cancer Patients. J. of Supportive Oncology, 2013Aug [Epub ahead of print].

Scott JG, Cohen D, Dicicco-Bloom B, Miller WL, Stange KC, Crabtree BF. Understanding healing relationships in primary care. Ann Fam Med. 2008 Jul-Aug;6(4):315-22. doi: 10.1370/afm.860. PubMed PMID: 18626031; PubMed Central
PMCID: PMC2478496.

Touch Caring & Cancer Program, available at http://partnersinhealing.net/index.htm

A Guide to Integrative Oncology for Clinicians and Patients, available at http://depts.washington.edu/integonc/clinicians/about.shtml

Office of Patient-Centered Care & Culture Transformation website, available at http://healthforlife.vacloud.us/

Office of Patient-Centered Care & Culture Transformation SharePoint site, available at http://vaww.infoshare.va.gov/sites/OPCC/default.aspx

Whole Health curriculum may be accessed at http://healthforlife.vacloud.us/index.php/research-education/education/

Cancer Care Navigation Team

Ana Fisher, LICSW OSW-C, Tamarind Keating, ARNP, Lynsi Slind, RN, MN

The Cancer Care Navigation Team is a multidisciplinary team partnering with Veterans with cancer to identify and eliminate barriers to care and improve outcomes

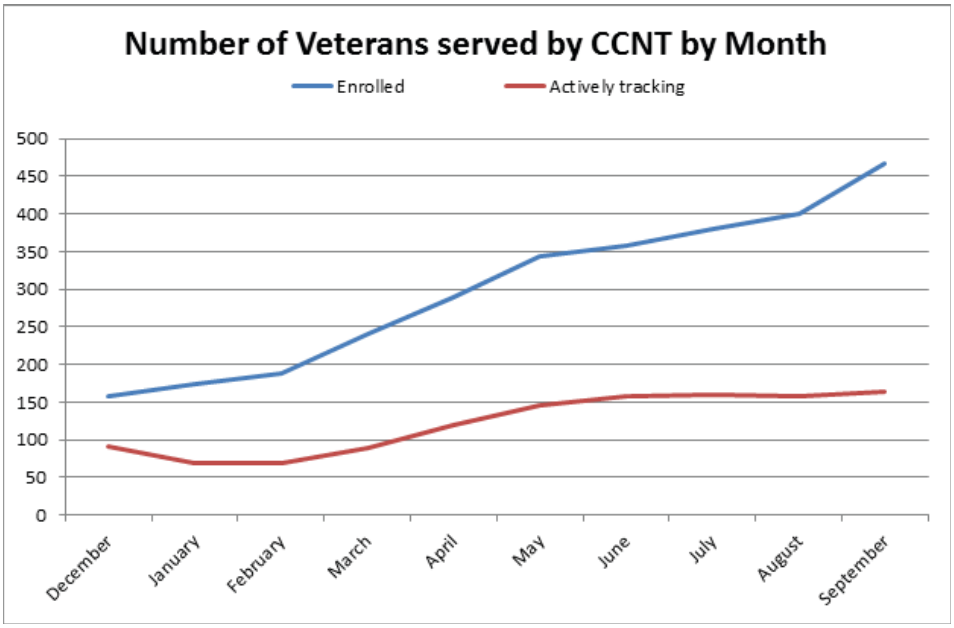
Cancer patient navigation was developed in the 1990s as a method to address health disparities that impact cancer prevention, detection, diagnosis, treatment and survival. Poverty, lack of insurance, distance from a treatment facility and other factors may be barriers that prevent patients from getting necessary and timely care. By partnering with vulnerable patient populations to identify and address these barriers, navigation programs have been able to improve screening rates, timeliness of care, compliance, patient satisfaction and survival rates. These programs have been implemented in cancer centers across the country and patient navigation is now a standard of care for programs accredited by the Commission on Cancer.

VISN20 implemented a network of Cancer Care Navigation Teams (CCNT) as part of a 3 year pilot program with sites in Anchorage, Boise, Portland, White City (Oregon), Roseburg, Seattle, Spokane, and Walla Walla. In Seattle, our CCNT includes a nurse practitioner, registered nurse, social worker and program support assistant.

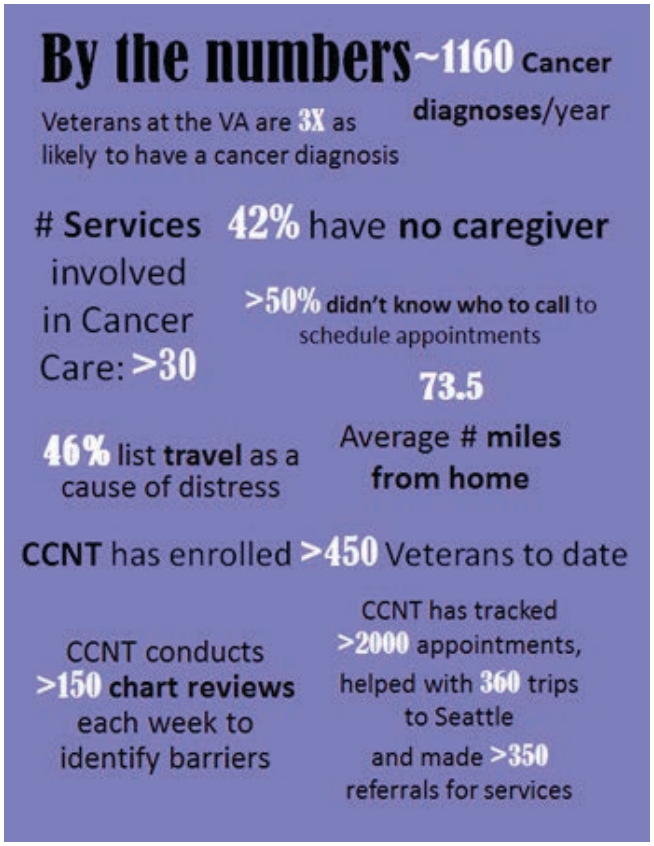
A community needs assessment completed in 2014 identified barriers Veterans encounter when receiving cancer care at the VA Puget Sound Health Care System (VAPSHCS). Compared to an ambulatory population, Veterans receiving care at a VA facility were three times as likely to be diagnosed with cancer and had higher rates of comorbidities that may impact their care. At VAPSHCS, an average of 1,160 Veterans are diagnosed or treated for cancer each year. Nearly half of patients traveled >50 miles to receive cancer care. Travel was a significant source of distress and affected the timeliness of care. In a local study reviewing lung cancer diagnoses, the mean time from suspicion to diagnosis was 48 days for Veterans living near Seattle and 76 days for those living near Spokane. Cancer survivorship care is an unmet need as 14% of Veterans receiving care at the VA have a history of cancer. Scheduling appointments, distress, nutrition, health promotion and health literacy were also important themes.

From these findings, CCNT implemented case management for priority groups identified to be at high risk for encountering barriers to care: Veterans who travel >100 miles for care, require multi-modality treatment and/or have significant psychosocial barriers to care. After enrollment to CCNT, we identify potential barriers to care and sources of distress and create a plan to address these. For Veterans referred from another VA facility, a history and physical is completed to document and manage other health conditions that may be relevant during an extended stay away from home. Veterans receive ongoing support through their treatment and a written treatment summary at the end, documenting their cancer diagnosis, treatment, complications and follow-up plan. This information is sent to home providers via interfacility consult.

In order to coordinate care for Veterans enrolled in CCNT services, weekly chart reviews are conducted and telephone rounds are held with navigation teams at other VISN20 facilities in order to identify and proactively address barriers to care and have provided these services to 450 Veterans since our program launch in late 2014. CCNT is also addressing barriers to



cancer care for all Veterans through several quality improvement initiatives. These include improving access to Nutrition services, expanding cancer distress screening, creating a cancer support group at American Lake, developing a patient resource library, documenting guidelines for cancer care consults, and creating a cancer survivorship clinic. CCNT also gave presentations regarding our navigation program and the impact of travel distance to the VA on distress at the annual Association of VA Hematology/Oncology Conference this year.



Please send us a consult, stop by our office (6 East – 6C-107), or email (tamarind.keating@va.gov) to engage our team and share feedback, concerns, or resources CCNT could use as we grow our program to reduce barriers to cancer care.

Refer a Veteran to CCNT
If they have a cancer diagnosis AND

- Travel >100 miles for care
- Require multi-modality care and/or
- Have significant psychosocial barriers to care

Submit a consult to Cancer Care Navigation Team in the CPRS consult menu or call: 206-277-4593

Oncology Social Work

Ana Fisher, LICSW, OSW-C; Melinda Walker, LICSW; Kimmy Van, LICSW

When patients receive a cancer diagnosis they have many concerns about what the diagnosis means, what to expect, details on medical care, concerns from loved ones, finances, and survival. Comprehending and organizing the provided information can provoke anxiety and be overwhelming while one is making important health care decisions. The role of the Oncology Social Worker (OSW) is central to helping patients, caregivers and communities with detection, prevention, navigation and survival in a rapidly-changing treatment environment. OSWs are uniquely trained in accessing resources, recognizing disparities in care, communication, stress reduction, family systems, advocacy, and community resources, allowing the OSW to affect positive change in the lives of Veterans and their families.

Specifically, OSWs strive to obtain accurate and up-to-date educational information and other resources for patients. The hope is that by contacting patients early in the process and providing them with verbal and written material, the patients will have a better understanding of what to expect during their treatment and will also be better prepared to cope. Social workers have been active in public education campaigns including workshops for veterans, conducting training for staff and community partners, and public message boards to inform Veterans about cancer prevention, detection and care; as well as Veterans' benefits and VA resources. The OSW also presented a component on cultural competence and grief, loss and bereavement during the End-of-Life Nursing Consortium in the Spring of 2015 and provided education to community hospice agencies on palliative care and hospice services at the VA . OSWs were involved in participated in the planning of the Cancer Prevention, Awareness, and Healthy Living hospital wide event on September 24, 2015. Additionally, OSWs provide ongoing education to social work students through the University of Washington School of Social Work (UWSSW) practicum program, which provides hands-on experience to students and to provide the University with input regarding Social Work in health care.

Support groups and educational offerings can be beneficial at all stages of the cancer experience. At VA Puget Sound, Social Workers co-facilitate a support group for patient caregivers who receive stem cell transplants as well as a general diagnosis support group for caregivers. Social Work, with the assistance of other departments, sponsors and organizes a day-long workshop developed for Veterans and their caregivers called "Heroes of the Heart," which provides information about self-care, resources available, Medicare and Medicaid planning, advance care planning, and estate planning. This workshop was held in March 2015. OSWs are also planning an ongoing Survivorship psycho-educational group for patients to provide information and support regarding the effects of cancer and treatment on emotions, work and family. Two new cancer support groups are scheduled to start at American Lake site: Veterans Cancer Support group and a Caregiver Support group in the Winter 2015.

Cancer treatment moves patients into a new awareness and self-image. Patients and their loved ones may feel incapable of managing independently at home. OSWs are highly skilled at assessing patients' and families' resources and referring patients to the level of care appropriate for their current situation and needs, including community outpatient programs, home health care, skilled nursing or assisted living facilities, or hospice/palliative care. OSW assisted in the implementation of the NCCN Distress Thermometer for Patients and is addressing the psychosocial needs of the Veterans at their initial radiation oncology and cancer care clinic visits.

OSWs participate as members of the inpatient consultation team in the palliative and hospice care program. Social workers, along with other staff members, focus on the patient's quality of life by assisting with end-of-life planning, care resources and emotional support. Additionally, OSWs provide the patient and loved ones with grief and bereavement support and referral to resources during this transition. Social workers participate in end-of-life education for staff members and education for community partners about the VA hospice and palliative care program, survivor benefits, and burial benefits.

OSWs are essential in Advance Care Directive (ACD) planning, education and completion. Social workers participate in a hospital-wide initiative to improve Veterans' and staff members' understanding of living wills, durable power of attorney, and the role of surrogate

decision makers. Veterans are encouraged to complete health care directives to ensure their ongoing participation in their own health care and to relieve stress for loved ones who are named as surrogate decision makers.

During the next year, OSWs at VA Puget Sound will continue to advocate for Veterans in our care, reducing barriers to care and increasing access to treatment whether through locating appropriate transportation resources or finding financial resources to allow them to keep their appointments. Social workers conduct quality training for veterans, caregivers, staff, and community members and will continue to train student interns at VA Puget Sound. Social Work will continue to hold trainings at community hospitals and institutions of higher education to increase awareness of Veterans' benefits, programs and unique health care needs. With renewed emphasis on survivorship, there are is now a cancer survivorship clinic at VA Puget Sound. OSWs will continue to work on the committee to improve the cancer survivorship resources and pass that information to Veterans and medical professionals at the hospital. We will continue to provide caregiver and Veteran education and support groups. These efforts support the overall goal to help patients maintain their quality of life while they cope with various issues that arise during cancer care.

Cancer Rehabilitation/ Rehabilitation Care Service

Meg Sablinsky, PT, DPT, CLT – LANA

For patients undergoing cancer treatment, quality of life matters as much—if not more—than the quantity of life. With an increasing focus on rehabilitation, patients are able to have improved quality of life during and after their cancer treatment. Patients undergoing cancer treatment may experience one or more of the following side effects: decreased muscle strength, decreased bone density, peripheral neuropathy related to chemotherapy, fatigue, decreased range of motion, pain, lymphedema, and scar adhesion. Rehabilitation Care Services can assist patients who have been diagnosed with cancer with a variety of their rehab needs on an inpatient or outpatient basis. These needs include pain control, weakness and deconditioning, mobility including assessment and provision of equipment for mobility safety, activities of daily living such as dressing/grooming/bathing, cognition, communication, swallowing, nutrition, bowel/bladder functions, skin integrity and wound management, lymphedema management, depression/adjustment/anxiety, social support, and vocational guidance. Goals for cancer rehabilitation often include effective pain control, maximal functional independence, restoration of maximal strength and mobility, prevention of further impairment, caregiver training to assist functionally-dependent patients, home management, community reintegration, and behavioral adaptation to pain and illness.

In addition, a specialized service that Rehabilitation Care Services offers is Complete Decongestive Therapy (CDT), a treatment for lymphedema. Lymphedema is swelling of a body part, most commonly involving the extremities, face and neck but it may also occur in the trunk, abdomen or genital area. It is most commonly the result of damage to the lymphatic system due to surgery or radiation treatment therapy, surgical procedures performed in combination with the removal of lymph nodes such as mastectomies, lumpectomies, prostatectomies, or neck dissection procedures, trauma or infection of the lymphatic system, as well as severe venous insufficiency. There is no cure for lymphedema. However, CDT can help reduce the swelling and maintain reduction, and significantly improve a patient's quality of life. This comprehensive treatment involves the following four steps:

- manual lymph drainage
- compression therapy (bandaging)
- decongestive exercises
- skin care

Once the treated extremity/area is back to close to normal size or is no longer reducing in size, the patient is fitted with a compression garment. Patients are also taught how to self manage their condition after treatment has ended. At the end of 6-8 weeks of sessions, we can expect a 60% decrease in the swelling, which facilitates functional activities for these patients. In addition, the lymphedema treatment program for head and neck patients will help them recover their ability to swallow and produce saliva, voice, and ROM of the neck.

During this 2015 year, our Lymphedema Clinic has a total of seven certified therapists: Brian Reaksecker, PT CLT, Mary Matthews-Brownell, OTR-L CLT, Maureen Mclain, PT CLT at ALVA, and in Seattle we have Erin Hirschler, OTR-L CLT, Meg Sablinsky, PT CLT-LANA, Melissa Smith, PTA CLT, and Jennifer Boyce, OTR-L, CLT.

We also have developed a Head and Neck Lymphedema Management Program and we are working closely with Radonc and Surgery to see these patients as early as possible. Sometimes it will be only for a few sessions, evaluating, educating about warning signs, decongestive exercises, range of motion exercises, posture, or sometimes manual lymphatic drainage when necessary. We are also trying to develop post-surgery education handouts, in conjunction with Surgery.

We also have an increasing number of early consults for patients with breast cancer, which is quite successful since most of the time they haven't developped lymphedema yet or it is at a very early stage. These patients receive education regarding warning signs, decongestive exercises, activities of daily life, manual lymphatic drainage when indicated, and sometimes they will be fitted with an appropriate compression garment.

In all the cases of oncology patients, not only do they get better with treatment, but they also feel somewhat reassured and feel support which is also very important. Their quality of life is much improved.

Palliative Care and Hospice Service Report

Lisa Vig MD and David A Gruenewald MD

The Palliative Care and Hospice Service (PCHS) continues to provide care for patients on both campuses of VAPSHCS. The Palliative Care Service saw 676 consults in FY15 (a 15% increase from FY14). Out of 373 inpatient palliative care consultations in FY 2015, 164 or 44% were cancer patients. Palliative Care saw 91% of all the Veterans who died within our facility, well exceeding the Emerging Measure 3 standard (55% of all inpatient deaths seen by the consultation team within 12 months prior to death). We also provided hospice referrals to 422 Veterans and paid for 66% of the hospice care provided under these referrals.

The consult service follows Veterans at both the Seattle (SEA) and at American Lake (AL) divisions. There are up to 10 hospice/palliative care beds in the SEA Community Living Center (CLC) and 12 beds at AL CLC. Outpatient palliative care services are now available at both SEA and AL, as well as limited home visits/in-home vesting visits in a defined area around the AL campus. Outpatient palliative care visits are up 74% in FY 2015 (303 consultations) compared to FY 2014 (174 consultations), reflecting an increase in both face-to-face visits and non-visit consultations (record reviews).

The PCHS continues to engage actively with our community partners in the We Honor Veterans program, sponsored by the Department of Veterans Affair in collaboration with the National Hospice and Palliative Care Organization (NHPCO). The program invites hospices and state hospice organizations into Hospice-Veteran Partnerships by recognizing the unique needs of America's Veterans and their families. The Palliative Care & Hospice staff has provided in-services at individual community hospices. A Military History Checklist has been incorporated into many hospices' initial assessments, which has increased calls to the PCHS as hospice programs seek ways to access VA benefits for Veterans in the community. Members of our palliative care team have met with representatives of our community hospice partners to dialogue about the services VA can offer to Veterans receiving hospice care in the community, and to answer logistical questions about how to arrange for these services.

The Bereaved Family Survey (BFS) is a national VA family satisfaction survey administered by the PROMISE Center that continues to monitor the quality of end of life care for inpatients at all VA medical centers. The national campaign slogan is "Strive for 65", which refers to the goal that 65% of bereaved family members responding to the BFS will rate the overall care the Veteran received at the end of life as "excellent". Our facility's performance on this indicator dropped from 60% in FY14 to 54% (below the national average of 61%) in the first 3 quarters of FY14. Examining the answer breakout for the BFS, a notable change from FY14 was a decrease in satisfaction with emotional support provided prior to and after the death of a loved one. We are evaluating the

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Palliative Care and Hospice Service Report (Continued)

specific comments of family members as well as the data by venue of care, to determine what kinds of interventions might be indicated. We are also monitoring BFS data to identify whether this is a longer term trend.

Palliative care is continuing to collaborate with our ICUs to improve palliative care in the ICU, with a focus on improving the quality and timeliness of family meetings. A stakeholder workgroup meets every 2 weeks and the workgroup reports progress to the Critical Care Committee. The workgroup is currently refining the family meeting note template that is currently in use. The existing template allows the collection of health factors to track quality measures for family meetings, including which disciplines were represented, the code status of the Veteran before and after the meeting, and goals of care at the end of the meeting. Additional modifications will bring the template in line with published quality indicators for family meetings. In the coming months we are planning to conduct a 4 hour palliative care educational session for ICU nurses. As noted in last year's report, the long term goal is to encourage these discussions to happen earlier in the course of care, which could result in fewer Veterans with cancer and other life-limiting illnesses receiving unwanted and inappropriate ICU-level interventions at the end of their lives. We have found that a surprising number of patients with terminal cancer are dying in the ICU. In a survey of ICU deaths in Q3 of FY 2013, 17 of 27 ICU deaths occurred in patients with terminal illnesses such as metastatic cancer at the time of ICU admission (Dr. Vincent Fan, personal communication). This presents an opportunity for collaboration between Oncology, ICU and Palliative Care.

With this in mind, the PCHS is seeing patients in the Cancer Care Clinic and in Radiation Oncology who are identified by their Oncology providers as being appropriate candidates for palliative care involvement (e.g., for goals of care discussions, symptom management support, family support, or other needs). As noted above, the number of outpatient palliative care consultations has increased markedly in the past year, with many of these consultations being for Veterans with cancer. We continue to work with the Cancer Care Navigation Team to improve the coordination of Veterans requiring Cancer Care.

Pulmonary Medicine

Richard B. Goodman, M.D.; David H. Au, M.D.; Tiffany M. Bridges, M.D.

Lung cancer is one of the most common solid tumors and the leading cause of cancer mortality in our nation's veterans. Prevention and diagnosis of lung cancer is a cornerstone of Pulmonary Medicine at the VA Puget Sound Health Care System. We evaluate a breadth of cases from incidentally discovered pulmonary abnormalities to highly suspicious lesions in the most at risk individuals with severe underlying pulmonary diseases such as COPD or IPF. Pulmonary Medicine maintains integral relationships with Diagnostic Radiology, Thoracic Surgery, Radiation Oncology, and Medical Oncology in order to expeditiously diagnose and support our veterans' optimal therapeutic options.

Pulmonary diagnostic services include fiberoptic bronchoscopy with bronchoalveolar lavage (BAL) for cytology and microbiologic assessment of concomitant infection, brush cytology, as well as endobronchial and transbronchial biopsies (TBBX) to aid in the histologic diagnosis of patients with suspected lung cancer. With our recent acquisition of endobronchial ultrasound (EBUS) for transbronchial needle aspiration (TBNA), we are on the verge of expanding our presurgical mediastinal staging capabilities and enhancing multidisciplinary care with Thoracic Surgery. We can perform thoracentesis for diagnostic analysis of pleural effusions and provide symptomatic relief for patients who suffer from malignant pleural fluid reaccumulation. The Pulmonary Function Laboratory (PFT) provides measurements of lung function that are invaluable in planning therapeutic interventions. We perform Cardiopulmonary Exercise Testing (CPET) as a non-invasive technique to quantitate cardiopulmonary reserve and aid in the accurate assessment of cardiovascular comorbidities and risk of postoperative complications of lung cancer resection.

Many of our veterans with lung cancer, diagnosed at any stage and undergoing any treatment modality, have underlying pulmonary disease, such as COPD, and their care can require continued support from Pulmonary Medicine,

Pulmonary Medicine (Continued)

Respiratory Therapy, and the Home Oxygen Program. The Pulmonary Rehabilitation Program at VAPSHCS is a joint venture with Rehab Medicine. In 2015, Pulmonary Medicine expanded clinics to American Lake in order to provide VAPSHCS veterans with improved access to pulmonary specialty care. Finally, we also provide consultation through the Specialty Care Access Network- Extension for Community Healthcare Outcomes (SCAN-ECHO) and are therefore reaching even our most rural veterans with potential lung malignancies and their providers.

Pulmonary Medicine supports two nationally recognized investigators studying quality of lung cancer care. Together with Medical Oncology and Thoracic Surgery, Pulmonary Medicine participates in the multidisciplinary team studying quality and timeliness of care in lung cancer patients as part of the OQP process to reduce wait-times.

Spiritual Care

Chaplain Gary K. Cowden, BCC and Chief of Chaplain Service

The Chaplain Service of the VA Puget Sound Health Care System has been given the overall spiritual care of all VA patients. Among our Veterans are those that experience the diagnosis and treatment of cancer. At the time of a patient's diagnosis and treatment projection, Chaplaincy endeavors to support the patient and their family as they progress through the various treatments, whether it is surgery, chemotherapy, radiation, or a stem cell transplant. Spiritual support covers both the negative and positive aspects of cancer care such as times of wellness and times of palliative intervention.

Chaplains are available with the treatment teams as various spiritual needs surface in the treatment process. Often, along with the concerns of treatment symptoms, comes uncertainty, anxiety, fear of treatment outcomes, guilt, and spiritual distress. Through consults and various patient contacts, chaplains give spiritual support affecting patient and family morale. Chaplains have also been involved in the Tele-health program which brings care to patients in their home.

One aspect of care involves times when treatment options become limited. Palliative Care chaplaincy affords opportunity to bring meaning and purpose to these times to help patients and their families transition to a different perspective on their treatment goals. Chaplains have given consistent and positive support through this process. When the limitations of science lead a patient toward another destiny, Chaplains are prepared to give spiritual support through these un-charted experiences to both the patient and the families surrounding them.

Finally, Chaplains bring bereavement care to patients and families in the journey of finishing their time of life. Memorial services are held twice a year for all patients who have been in the hospital at their end of life. Their families are invited to attend as a way of celebrating their memory. Each family is invited to attend and to bring pictures and memorabilia that helps share their memory with others. The Hospital Director and various staff members are invited to share the experience. Family members are invited to share their loved ones experience. Many of the stories of support by the VA Hospital give overwhelming credibility to the Cancer program .

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